FIFTY CENTS

OWNER'S MANUAL

- ASSEMBLY
- OPERATION
- MAINTENANCE
- PARTS LIST

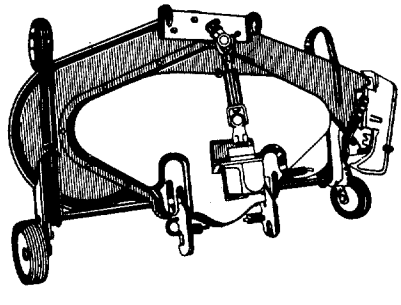
Model No. 198-982A

FOR 990

Important:

Read Safety Rules and Instructions Carefully

42" QUICK DISCONNECT MOWING UNIT



PRINTED IN U.S.A.

FORM No. 770-7897

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges under this warranty must be paid by the purchaser unless return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, motor, battery, battery charger or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

IMPORTANT

It is suggested that this manual be read in its entirety before attempting to assemble or operate. Keep this manual in a safe place for future reference and for ordering replacement parts.

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see operating section of this manual for proper fuel and amount.

Your rotary mower is a precision piece of power equipment, not a plaything. Therefore exercise extreme caution at all times.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Know the controls and how to stop quickly—READ THE OWNER'S MANUAL.
2. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instruction. Only persons well acquainted with these rules of safe operation should be allowed to use your mower.
3. Do not carry passengers.
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop engine when they are in the vicinity of your mower. Although the area of operation should be completely cleared of foreign objects, a small object may have been overlooked and could be accidently thrown by the mower in any direction.
5. Clear work area of objects which might be picked up and thrown by the mower in any direction.
6. Disengage all attachment clutches and shift into neutral before attempting to start engine.
7. Disengage power to attachment(s) and stop engine before leaving operator position.
8. Disengage power to attachment(s) and stop engine before making any repairs or adjustments. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
9. Before attempting to unclog the mower or discharge chute, stop the engine and be sure the blade(s) have stopped completely. Disconnect the spark plug wire and keep the wire away from the plug to prevent accidental starting.
10. Disengage power to attachment(s) when transporting or not in use.
11. Take all possible precautions when leaving vehicle unattended such as disengaging power-take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key.
12. Do not stop or start suddenly when going uphill or downhill. Mow up and down face of steep slopes; never across the face.
13. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
14. Stay alert for holes in terrain and other hidden hazards.
15. Use care when pulling loads or using heavy equipment.
    A. Use only approved drawbar hitch points.
    B. Limit loads to those you can safely control.
    C. Do not turn sharply. Use care when backing.
    D. Use counterweight(s) or wheel weights when suggested in owner's manual.
16. Watch out for traffic when crossing or near roadways.
17. When using any attachments never direct discharge of material toward bystanders nor allow anyone near vehicle while in operation.
18. Handle gasoline with care—it is highly flammable.
    A. Use approved gasoline container.
    B. Never remove cap or add gasoline to a running or hot engine or fill fuel tank indoors. Wipe up spilled gasoline.
    C. Open doors if engine is run in garage—exhaust fumes are dangerous. Do not run engine indoors.
19. Keep the vehicle and attachments in good operating condition, and keep safety devices in place. Use guards as instructed in owner's manual.
20. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
21. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
22. To reduce fire hazard keep engine free of grass, leaves or excessive grease.
23. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
24. Do not change the engine governor settings or overspeed the engine.
25. When using the vehicle with mower, proceed as follows:
    (1) Mow only in daylight or in good artificial light.
    (2) Never make a cutting height adjustment while engine is running if operator must dismount to do so.
    (3) Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher.
    (4) Check blade mounting bolts for proper tightness at frequent intervals.
26. Check grass catcher bags frequently for wear or deterioration. For safety protection replace only with new bag meeting original equipment specifications.
27. Look behind to make sure the area is clear before placing the transmission in reverse and backing up.

WARNING

The mower shall not be operated without the entire grass catcher or chute deflector in place.

NOTE

Under normal usage bag material is subject to wear, and should be checked periodically. Be sure any replacement bag complies with the mower manufacturer's recommendations.

TOOLS REQUIRED

One 3/8" open end or box wrench.

ASSEMBLY

Your mowing unit comes completely assembled with the exception of the universal drive shaft.

Step 1. Place the universal drive shaft on the input shaft of right angle drive. See figure 1.

NOTE

Be sure key is on input shaft.

Step 2. Secure the drive shaft by tightening the two set screws.

FIGURE 1.

ATTACHING THE DECK

See figure 2.

Step 1. a. Transaxle Drive Tractor
Raise the lift handle located on the right hand side of tractor to highest position.

b. Hydrostatic Tractor
Place the hydraulic lift lever in the up position.

Step 2. Using the wheel adjustment lever on the cutting deck, place the cutting deck wheels in the lowest position (Forward).

Step 3. Turn tractor steering wheel to the left. Slide cutting deck underneath tractor from the right hand side.

NOTE

The right hand side of the tractor is determined by the operator's position, sitting on the unit facing forward.

Step 4. A. Place the universal drive shaft on the PTD pulley on tractor.
B. Secure the drive shaft by tightening the set screw.

Step 5. Pull the cutting deck, release pins and turn the cutting deck rear hanger locks up.

Step 6. Slide the cutting deck forward approximately one or two inches.

Step 7. Push the lift handle forward and position the cutting deck squarely beneath the carriage.

Step 8. Raise the cutting deck wheel adjustment lever so that the rear hanger slots line up with rear carriage bar.

Step 9. Lift the front of the cutting deck and push back, also making sure that the front deck hanger slots go over front carriage bar.

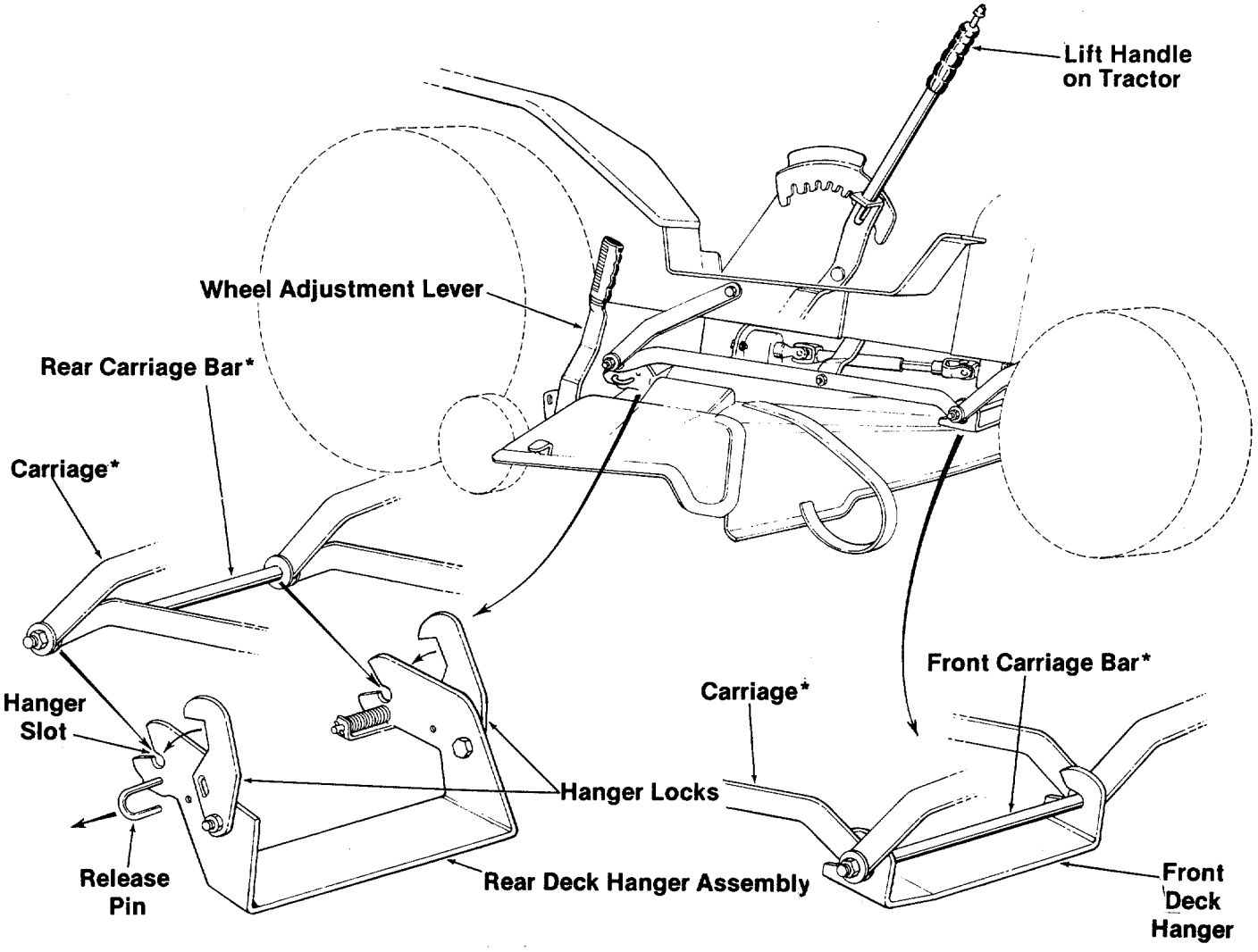
Step 10. Pull the release pins and lock in place on both sides.

SETTING THE CUTTING HEIGHT

Transaxle Drive Tractor. Set the wheel adjustment lever in the desired cutting height position. Pull the lift lever handle back until it supports the front of the cutting deck and the cutting deck is PARALLEL to the ground.

Hydrostatic Drive Tractor. Set the wheel adjustment lever in the desired cutting height position. Use the deck adjuster located on the left hand side of the tractor to set the low limit on the cutting deck. (See your tractor manual.) This should work in conjunction with the wheel adjustment lever so the cutting deck is parallel to the ground.

*Not Part of the Deck



OPERATING THE CUTTING DECK

To stop the blades from turning depress the PTO engagement lever (see the tractor manual) until it is in the disengaged position.

NOTE

The PTO engagement lever must be in the disengaged position before the engine will start.

When performing any maintenance or adjustments on the cutting deck, be sure to shut off the engine.

To engage the blades, set the throttle control in the FAST position and engage the PTO engagement lever.

NOTE

For best mowing results, use high engine or blade speed and low travel speed. Throttle should be at FAST position.

LUBRICATION

Right Angle Drive. Check the grease level after every 25 hours of operation. The gear box contains 4 oz. of E.P.G. Lithium grease.

Deck Wheels. There are two styles of bearings used on the cutting deck wheels; sintered iron and oil impregnated bronze. The sintered iron bearings are gray in color and the wheel has a grease fitting. If you have sintered iron bearings they should be lubricated after every 25 hours of operation with a grease gun using a multi-purpose automotive type grease. If your wheels are

equipped with oil impregnated bronze bearings (bronze in color and no grease fitting on the wheel) they require no lubrication for a normal life. The life of the bearings can be extended by lubricating them with a non-detergent oil after every 25 hours of operation.

NOTE

In extremely dusty areas it is best not to oil the oil impregnated bearings.

Carriage. Lubricate the pivot points where the arms either slide or pivot after every 25 hours of operation. Use a multi-purpose automotive type grease.

Sealed Spindles. No grease fittings. (Ref. No. 38) These spindles have factory sealed bearings and require no lubrication.

SHARPEN BLADES

Remove the center bolt (44) and lockwasher (45) and pull the blade and blade adapter from the blade spindle. If the blade adapter does not come off easily, remove the two outside bolts (43) from the blade adapter.

When grinding or filing the blades to sharpen them, remove equal amounts of metal from both edges to keep the blade in balance. The blade can be tested for balance by balancing it on a screwdriver held in a vise. Remove metal from the heavy side until it balances directly over the center hole in the blade. When replacing the blade, be sure that the air-foil is turned up.

Tighten bolts and nuts securely.

BELT REPLACEMENT

Use Part No. 754-0125.

1. Remove the mowing deck cover (Ref. No. 1.).
2. Remove the spring (Ref. No. 68) from the idler. There should be enough slack on the belt to remove it.
3. Assemble the new belt using figure 3 as a guide.

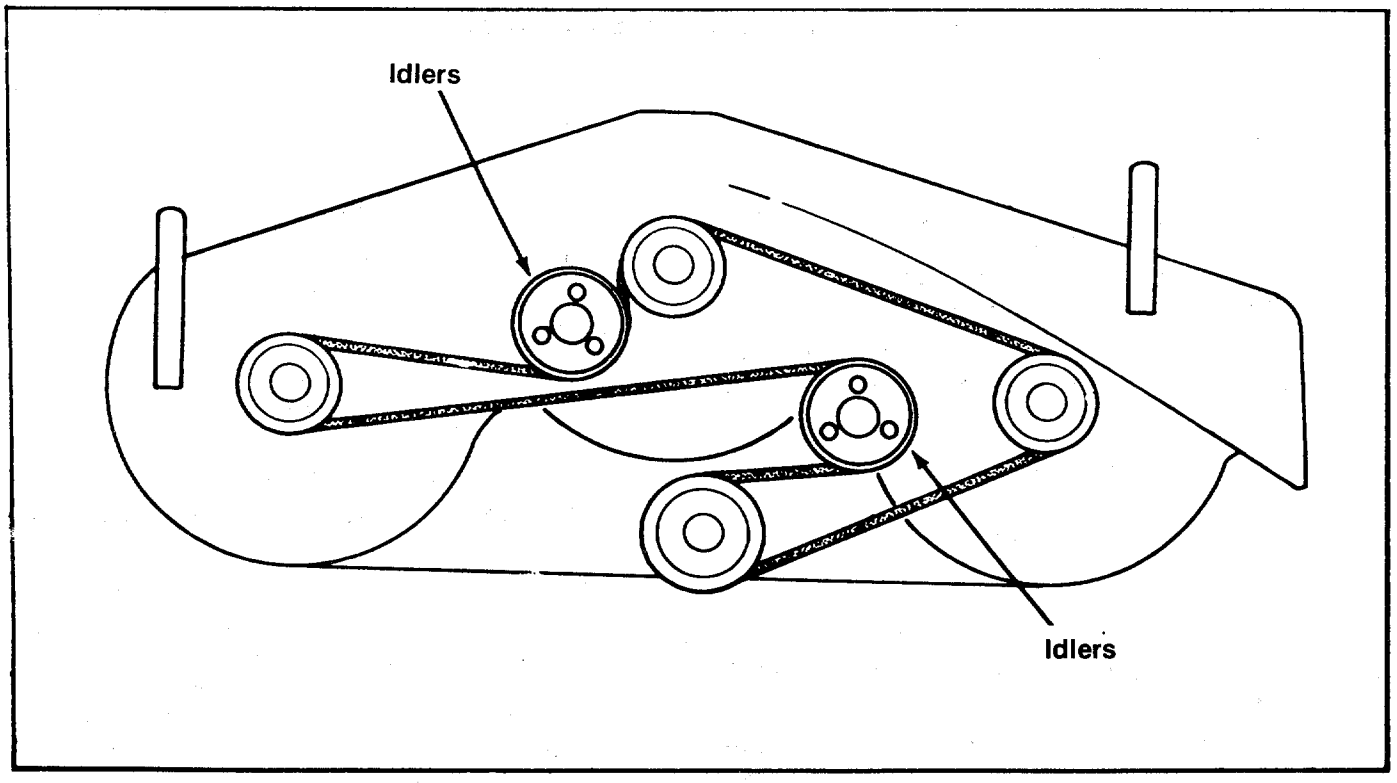
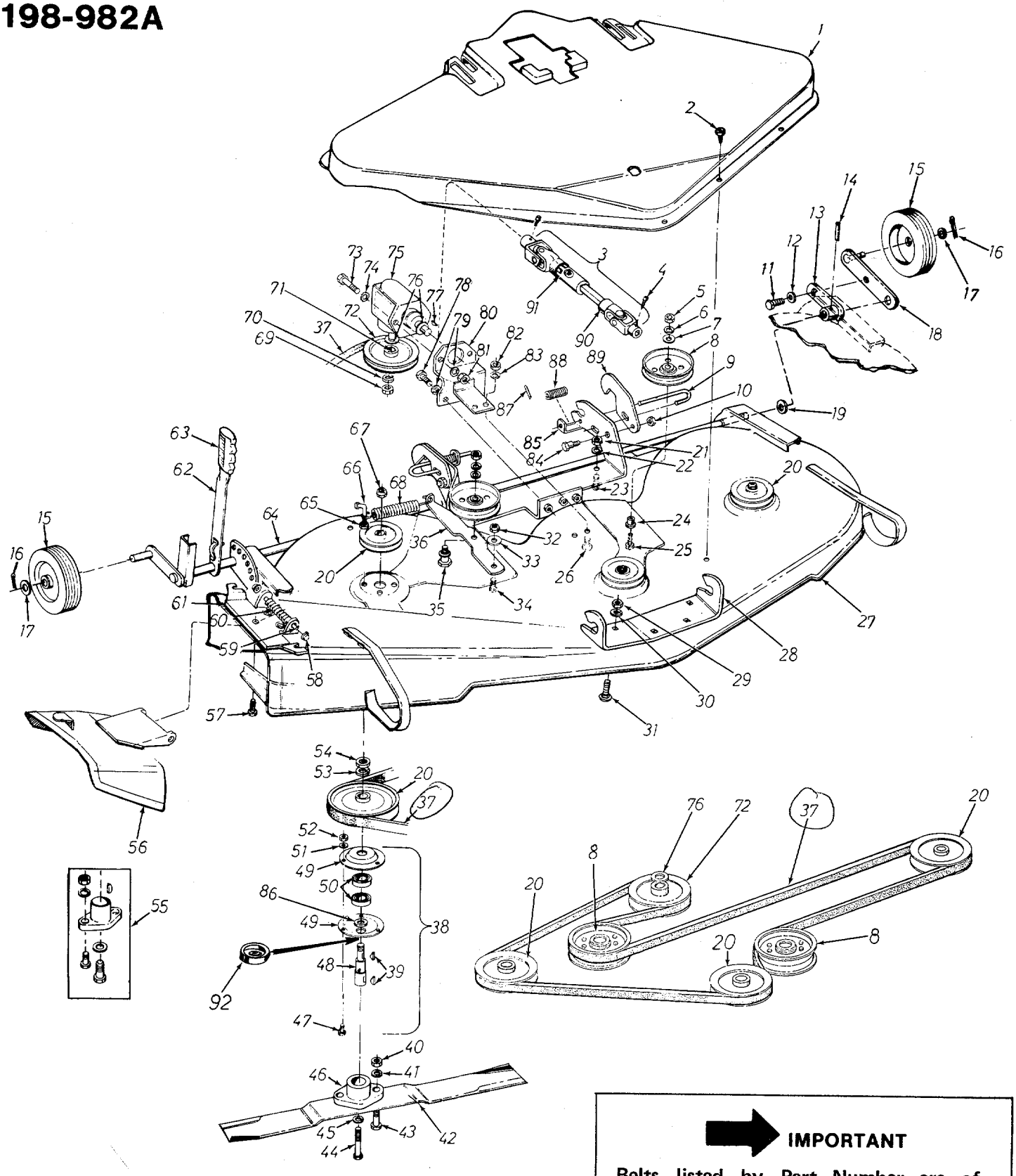


FIGURE 3. INSTALLING THE BELT

NOTES

198-982A



IMPORTANT

Belts listed by Part Number are of special construction and should be used when replacement is necessary. The dimensions and description given are for general reference only and belts purchased by description and dimension generally will only provide temporary service.

PARTS LIST FOR MODEL 198-982A

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	12565		Deck Belt Cover	
2	710-0352		Hex Self Tap. Scr. ¼" x .38	
3	717-0135		Universal Drive Shaft Ass'y.	
4	710-0357		Sq. Hd. Set Scr. 3/8-16 x .50" Cup	
5	712-0116		Hex Cent. L-Nut 3/8-24 Thd.	
6	736-0169		L-Wash. 3/8" Scr.*	
7	736-0300		Fl-Wash. .385 I.D. x 1.47 O.D.	
8	711-0306		Deck Idler	
9	747-0160		Release Pin	
10	712-0158		Hex Cent. L-Nut 5/16-18 Thd.	
11	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
12	736-0105		Bell.-Wash. .400 I.D. x .88 O.D.	
13	12669		Wheel Adj. Plate Ass'y.	
14	715-0114		Spring Pin Spir. ¼" Dia. x 1.50" Lg.	
15	734-0225		Wheel Ass'y.—Comp.—6 x 1.75	
16	714-0121		Cotter Pin 5/32" Dia. x 1.00" Lg.	
17	736-0116		Fl-Wash. .635 I.D. x .93 O.D.	
18	12667		Deck Wheel Brkt. Ass'y.	
19	748-0160		Spacer .755 I.D. x 1.25 O.D. x .180	
20	756-0187		Deck Pulley	
21	712-0267		Hex Nut 5/16-18 Thd.*	
22	736-0119		L-Wash. 5/16" Scr.*	
23	710-0451		Carriage Bolt 5/16-18 x .75" Lg.*	
24	711-0598		Idler Adapter	
25	710-0937		Hex Scr. 3/8-16 x 2.5" Lg.	
26	710-0451		Carriage Bolt 5/16-18 x .75" Lg.*	
27	12566		Deck Assembly	
28	12562		Front Deck Hanger	
29	712-0267		Hex Nut 5/16-18 Thd.*	
30	736-0119		L-Wash. 5/16" Scr.*	
31	710-0451		Carriage Bolt 5/16-18 x .75" Lg.*	
32	712-0130		Hex Ins. L-Nut 3/8-16 Thd.	
33	07386		Fl-Wash. .390 I.D. x 1.75 O.D. x 3/16	
34	738-0149		Shld. Scr. .625 Dia. x .425	
35	738-0150		Shld. Scr. .625 Dia. x .960	
36	09489		Deck Spring Idler Brkt.	
37	754-0125		V-Belt "A" Section 105 Lg.	
38	717-0251		Spindle Ass'y.—Comp.	
39	714-0365		#6 Hi-Pro Key 5/32" x 5/8" Dia.	
40	712-0123		Hex Nut 5/16-24" Thd.*	
41	736-0119		L-Wash. 5/16" Scr.*	
42	742-0129		Blade—14.75" Lg.	
43	710-0117		Hex Scr. 5/16-24 x 1.00" Lg.	
44	710-0459		Hex Scr. 3/8-24 x 1.50" Lg.	
45	736-0217		L-Wash. 3/8" Scr. H.D.	
46	10769		Blade Adapter Kit	
47	710-0117		Hex Scr. 5/16-24 x 1.00" Lg.	
48	738-0164		Spindle	
49	08253		Bearing Housing	
50	741-0919		Ball Brg. .787 I.D. x 1.85 O.D.	
51	736-0119		L-Wash. 5/16" Scr.*	
52	712-0123		Hex Nut 5/16-24 Thd.*	
53	736-0158		L-Wash. 5/8" Scr.*	
54	712-0261		Hex Jam Nut 5/8-11 Thd.	
55	10769		Blade Adapter Kit	
56	11633		Chute Cover Ass'y.—Comp.	
57	710-0230		Hex Scr. ¼-28 x .50" Lg.	
58	726-0106		Pushnut ¼" Rod	
59	711-0571		Hinge Pin	
60	732-0261		Torsion Spring	
61	11399		Adapter Ass'y.	
62	09548		Deck Wheel Adj. Handle Ass'y.	
63	08118		Grip	
64	12679		Wheel Brkt. Shaft Ass'y.	
65	712-0287		Hex Nut ¼-20" Thd.*	
66	711-0152		Hook Bolt	
67	712-0261		Hex Jam L-Nut 5/8-11 Thd.	
68	732-0180		Extension Spring	
69	712-0923		Hex Cent. L-Nut 5/8-18 Thd.	
70	736-0158		L-Wash. 5/8" Scr.*	
71	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia.	
72	756-0186		Deck Drive Pulley	
73	710-0342		Hex Scr. 3/8-16 x 1.25" Lg.*	
74	736-0148		External L-Wash. 3/8" Scr.	
75	—		Right Angle Gear Box	
76	736-0181		Fl-Wash. .938" I.D. x 1.47 O.D.	
77	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia.	
78	710-0253		Hex Scr. 3/8-16 x 1.00" Lg.*	
79	736-0169		L-Wash. 3/8" Scr.*	
80	09505		Mounting Brkt. Ass'y—Gear Box	
81	712-0798		Hex Nut 3/8-16 Thd.*	
82	712-0267		Hex Nut 5/16" Scr.*	
83	736-0169		L-Wash. 5/16" Scr.*	
84	738-0296		Shld. Bolt	
85	12759		Rear Deck Hanger Ass'y.	
86	736-0287		Fl.-Wash. .793 I.D. x 1.24 O.D. x .060	
87	714-0129		Roll Pins 1/8" Dia.	
88	732-0306		Compression Spring	
89	12564		Hanger Lock	
90	717-0249		Universal Drive Shaft Male Half	
91	717-0248		Universal Drive Shaft Female Half	
92	13703		Bearing-Shield	N

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

NOTE

This instruction manual covers various models and all specifications shown do not necessarily apply to your model. Specifications subject to change without notice or obligation.

NOTE: This unit is not under warranty by the mower manufacturer. All Part Orders and Service must be handled through the Local Authorized Tecumseh Service Dealer.

This unit is under warranty by Tecumseh Products Company. Parts and Service are available through all Tecumseh, Lauson Power Products Service Dealers. Check the "Yellow Pages" of your telephone directory under "Engines—Gasoline."

RIGHT ANGLE DRIVE BOX (PEERLESS2604-P91)

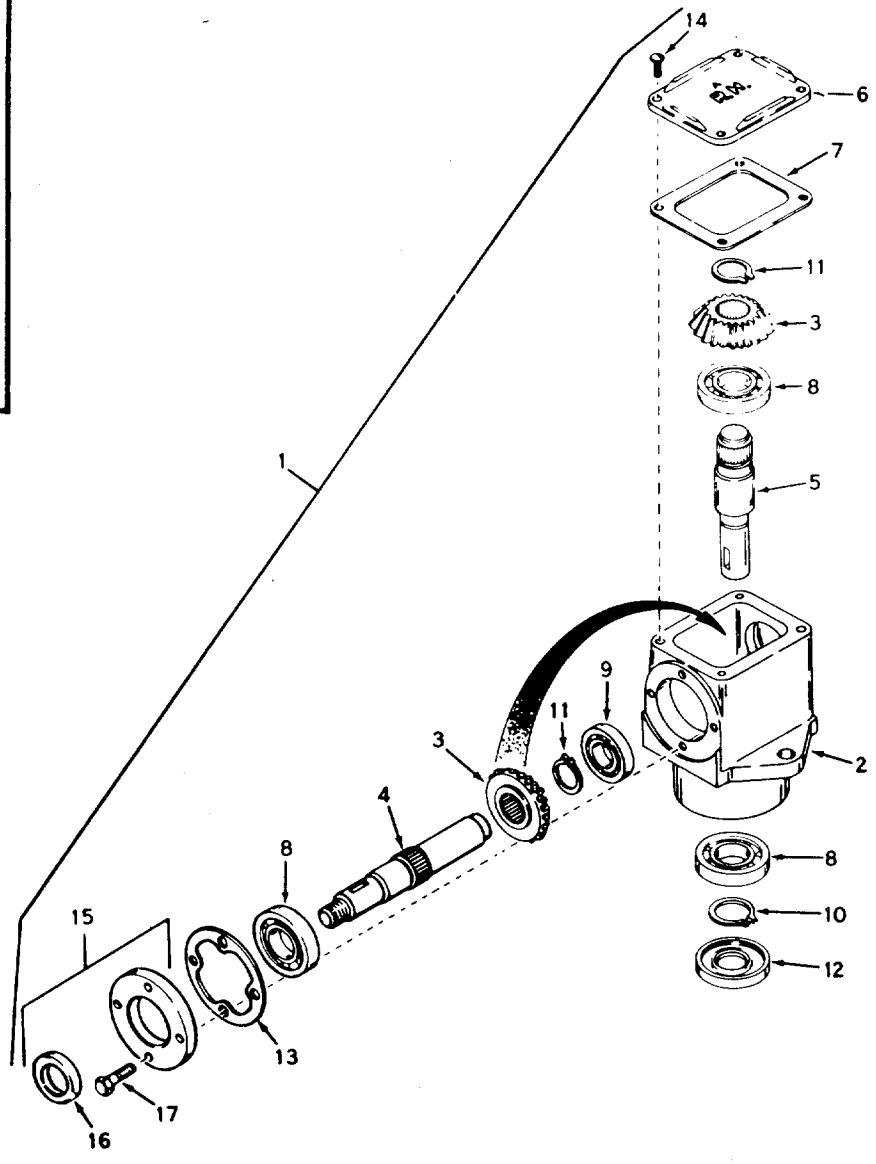


FIGURE 5.

PARTS LIST FOR RIGHT ANGLE DRIVE BOX (PEERLESS 2604-P91)

REF. NO.	PART NO.	DESCRIPTION
1	PE-794111	Head Ass'y. R.H. (Incl. Nos. 2 thru 15)
2	PE-770026	Housing, Right Angle Drive
3	PE-778046	Gear, Miter
4	PE-776149	Shaft, Input
5	PE-776129	Shaft, Output
6	PE-772034	Cover, Right Hand
7	PE-788028	Gasket, Cover
8	PE-780034	Bearing, Ball
9	PE-780024	Bearing, Ball
10	PE-788019	Ring, Snap
11	PE-788018	Ring, Snap
12	PE-788029	Seal, Oil
13	PE-788030	Gasket, Cap
14	PE-792025	Screw, Rd. Hd. Self Tap., 10-24 x ½
15	PE-786029	Cap & Seal Ass'y., Retainer (Incl. Nos. 16 & 17)
16	PE-788031	Seal, Oil
17	PE-792026	Screw, Hex Hd. ¼-20 x 7/8

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service for all MTD manufactured power equipment are available through the authorized service firms listed below. All orders should specify the model number of your unit, parts number, description of parts and the quantity of each part required.

ALABAMA	**BIRMINGHAM**		
Auto Electric & Carburetor Co.		2625 4th Ave. S.	35233
ARKANSAS	**NORTH LITTLE ROCK**		
Sutton's Lawn Mower Shop		Rt. 4, Box 368	72117
	FORT SMITH		
Mity Mite Motors, Inc.		2515 Towson Ave.	72901
CALIFORNIA	**PORTERVILLE**		
Billious		75 North D Street	93257
	SAN BERNARDINO		
Lawn Mower Supply Co.		25608 E. Baseline	92410
	SAN FRANCISCO		
J.W. Jewett Co.		981 Folsom St.	94107
	SACRAMENTO		
Luttig & Severson		2030 28th St.	95818
COLORADO	**DENVER**		
South Denver Lawn Equip.		527 West Evans	80223
CONNECTICUT	**SUFFIELD**		
The Jones & Ramsey Co.		850 Thompsonville Rd.	06078
FLORIDA	**JACKSONVILLE**		
Radco Distributors		2403 Market St.	32206
	CORAL GABLES		
Moz-All of Florida, Inc.		365 Greco Ave.	33146
GEORGIA	**EAST POINT**		
East Point Cycle & Key		2834 Church St.	30344
ILLINOIS	**LYONS**		
Keen Edge Co.		8615 Ogden Ave.	60534
INDIANA	**ELKHART**		
Parts & Sales Inc.		2101 Industrial Pkwy.	46514
IOWA	**DUBUQUE**		
Power Lawn & Garden Equip.		2551 J.F. Kennedy	52001
LOUISIANA	**NEW ORLEANS**		
Suhren Engine Co.		8330 Earhart Blvd.	70118
MARYLAND	**TAKOMA PARK**		
Center Supply Co.		6867 New Hampshire Ave.	20012
MASSACHUSETTS	**SPRINGFIELD**		
Morton B. Collins Co.		300 Birnie Ave.	01107
MICHIGAN	**MOUNT CLEMENS**		
Power Equipment Dist.		36463 South Gratiot	48043
	LANSING		
Lorenz Service Co.		2500 S. Pennsylvania	48900
MINNESOTA	**MINNETONKA**		
Hance Distributing Inc.		11212 Wayzata Blvd.	55343
MISSISSIPPI	**BILOXI**		
Biloxi Sales & Service, Inc.		506 Caillavet St.	39533
MISSOURI	**KANSAS CITY**		
Automotive Equip. Service		3117 Holmes St.	64109
	ST. LOUIS		
Henzler, Inc.		2015 Lemay Ferry Rd.	63125
NEW JERSEY	**BELLMAWR**		
Lawnmower Parts Inc.		717 Creek Rd., P.O. Box 7	08030

BRIGGS & STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline**, Briggs & Stratton or Tecumseh Lauson.

NEW YORK	**CARTHAGE**		
Gamble Dist., Inc.		West End Ave.	13619
NORTH CAROLINA	**GREENSBORO**		
Dixie Sales Company		327 Battleground Ave.	27402
	GOLDSBORO		
Smith Hardware Co.		515 N. George St.	27530
OHIO	**WADSWORTH**		
National Central		687 Seville Rd.	44281
	CLEVELAND		
Bleckrie, Inc.		7900 Lorain Ave.	44102
	CARROLL		
Stebe's Mid-State Mower Supply		Box 366	43112
	WILLARD		
Sunshine Wholesale Tire Outlet		Route 224	44890
OKLAHOMA	**MUSKOGEE**		
Victory Motors, Inc.		605 S. Cherokee	74401
	ADA		
Ada Auto Supply		301 E. 12th St.	74820
OREGON	**PORTLAND**		
Kenton Supply Co.		8216 N. Denver Ave.	97217
PENNSYLVANIA	**LANCASTER**		
Raub Supply Co.		James & Mulberry Sts.	17604
	PITTSBURGH		
Bluemont Co.		11125 Frankstown Rd.	15235
TENNESSEE	**KNOXVILLE**		
Master Repair Service		2423 Broadway, N.E.	37917
	MEMPHIS		
Memphis Cycle & Supply Co.		421 Monroe Ave.	3810
American Sales & Service, Inc.		1922 Lynnbrook	38116
TEXAS	**DALLAS**		
Marr Brothers, Inc.		423 E. Jefferson	75203
	HOUSTON		
Bullard Supply Co.		2409 Commerce St.	77003
	SAN ANTONIO		
Catto & Putty, Inc.		P.O. Box 2408	78206
	FORT WORTH		
Woodson Sales Corp.		1702 N. Sylvania	76111
UTAH	**SALT LAKE CITY**		
A-1 Engine & Mower Co.		437 E. 9th St.	84111
VERMONT	**BURLINGTON**		
Vermont Appliance Co.		44 Lakeside Ave.	05401
VIRGINIA	**RICHMOND**		
RBI Corp.		963 Myers St.	23260
WASHINGTON	**SEATTLE**		
Bailey's Rebuild, Inc.		1325 E. Madison St.	98102
WEST VIRGINIA	**CHARLESTON**		
Young's, Inc.		233 Virginia St., E.	25301
WISCONSIN	**APPLETON**		
Automotive Supply Co.		123 S. Linwood Ave.	54911

WARRANTY PARTS AND SERVICE POLICY

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES

1. **Replacement of Missing Parts** on new equipment.
2. **Replacement of Defective Parts** within the warranty period.
3. **Repair of Defects** within the warranty period.

All claims MUST be substantiated with the following information:

1. **Model Number** of unit involved.
2. **Date** unit was purchased or first put into service.
3. **Date of failure.**
4. **Nature of failure.**

MTD PRODUCTS INC • 5389 WEST 130th STREET • P.O. BOX 2741 CLEVELAND OHIO 44111